

### **REMARKS/ARGUMENTS**

Reconsideration of the present patent application, as amended, is respectfully requested.

In response to the Examiner's continued objections to the drawings, a new drawing of Fig. 1 is submitted. The applicants note that support for these changes are found in at least originally submitted claims 7 and 21. With respect to the objection to previously submitted drawing for Fig. 4A, the applicants are uncertain as to what the Examiner's objections are and respectfully request that he withdraw his objections.

Claim 24 was objected to and has been amended accordingly.

Claims 2-4, 9-14, 18-19, and 28-30 were rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. Accordingly, claims 2, 9-10, 18-19 and 28-30 have been amended.

Substantively, of previously pending claims 1-33, all were rejected. Claims 1, 5-7, 16, 20-25, 27, and 31-33 were rejected under 35 U.S.C. §103(a) as being obvious over previously cited U.S. Patent No. 6,433,904, which issued August 13, 2002 to E.A. Swanson *et al.* The applicants assume that Examiner meant to reject all independent claims 1, 9, 16, 24, 32 and 33. The Examiner acknowledges that "Swanson does not expressly disclose: applying error correction coding to said first and second data signals such that said second signal experiences a greater coding gain than said first data signal." The Examiner stated that the cited Swanson patent teaches "applying error correction coding (FEC encoder 40) to **one** of the data signals so that the error correction coded data signal experiences a greater coding gain than the other uncoded data signal. However, coding **multiple** data signals such that one coded data signal experiences a greater coding gain than another coded data signal is obvious within the teachings of Swanson....At the time the invention was made, yes, it would have been obvious to one of ordinary skill in the art to implement further upgrading of channels (col. 6, l. 8). That is, consider a system that already has an upgraded channel according to Swanson's upgrading teachings, e.g., a system, similar to Fig. 3, with a channel that has been upgraded by a factor of 4, similar to col. 8, l. 2-9. If one desires to further upgrade another channel to increase channel

capacity, e.g., by a factor of 16, one would simply apply Swanson's upgrading teachings to a channel that has not been upgraded. That motivation would be the common improvement of increased transmission capacity (col. 6, line 8), which is an explicit purpose of Swanson's teachings (col. 3, l. 3-7) (Examiner's emphasis.)."

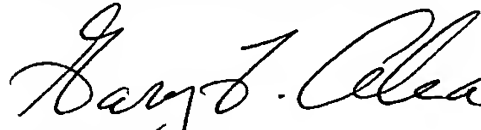
With due respect to the Examiner's position, the applicants disagree. First, the extensive teachings of Swanson *et al.* cited by the Examiner for upgrading channels work against the Examiner's position. The combinations and permutations of using FEC on channels are numerous. Nonetheless, not even a passing mention is made of the applicants' claimed invention. Secondly, the repeated cautionary language in the Swanson patent suggest that the Examiner is perhaps hasty in assuming what a person of ordinary skill in the art would be motivated to do or perhaps reflects impermissible hindsight of the applicants' invention. For example, immediately after the portion (col. 8, ll. 2-9) cited by the Examiner for upgrading a channel, Swanson *et al.* warn, "However, other considerations come into play when a channel at rate R' which originally designed for rate R. Of particular concern are chromatic dispersion and polarization mode dispersion. The effects of dispersion in optical systems become more pronounced...."

Hence the applicants assert that Swanson patent does not render the applicants' independent claims obvious and the claims should be allowable. The remaining claims should be allowable for at least being dependent upon allowable base claims.

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Therefore, in view of the amendments above and the remarks directed thereto, the applicant request that all rejections be withdrawn, that claims 1-7, 9-14, 16, 18-25 and 27-33 be allowed, and the case be passed to issue. If a telephone conference would in any way expedite the prosecution of the application, the Examiner is asked to call the undersigned at (408) 868-4088.

Respectfully submitted,



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**Amendments to the Drawings:**

The attached sheet of drawings replaces previously submitted sheet including Fig. 1. The replacement drawing includes changes: to Fig. 1 on the left side of the drawing to indicate the general equality for the modulated optical signals when multiplexed together and for the modulated optical signals after amplification.

Attachment: Replacement Sheet(s)  
Annotated Sheets Showing Changes

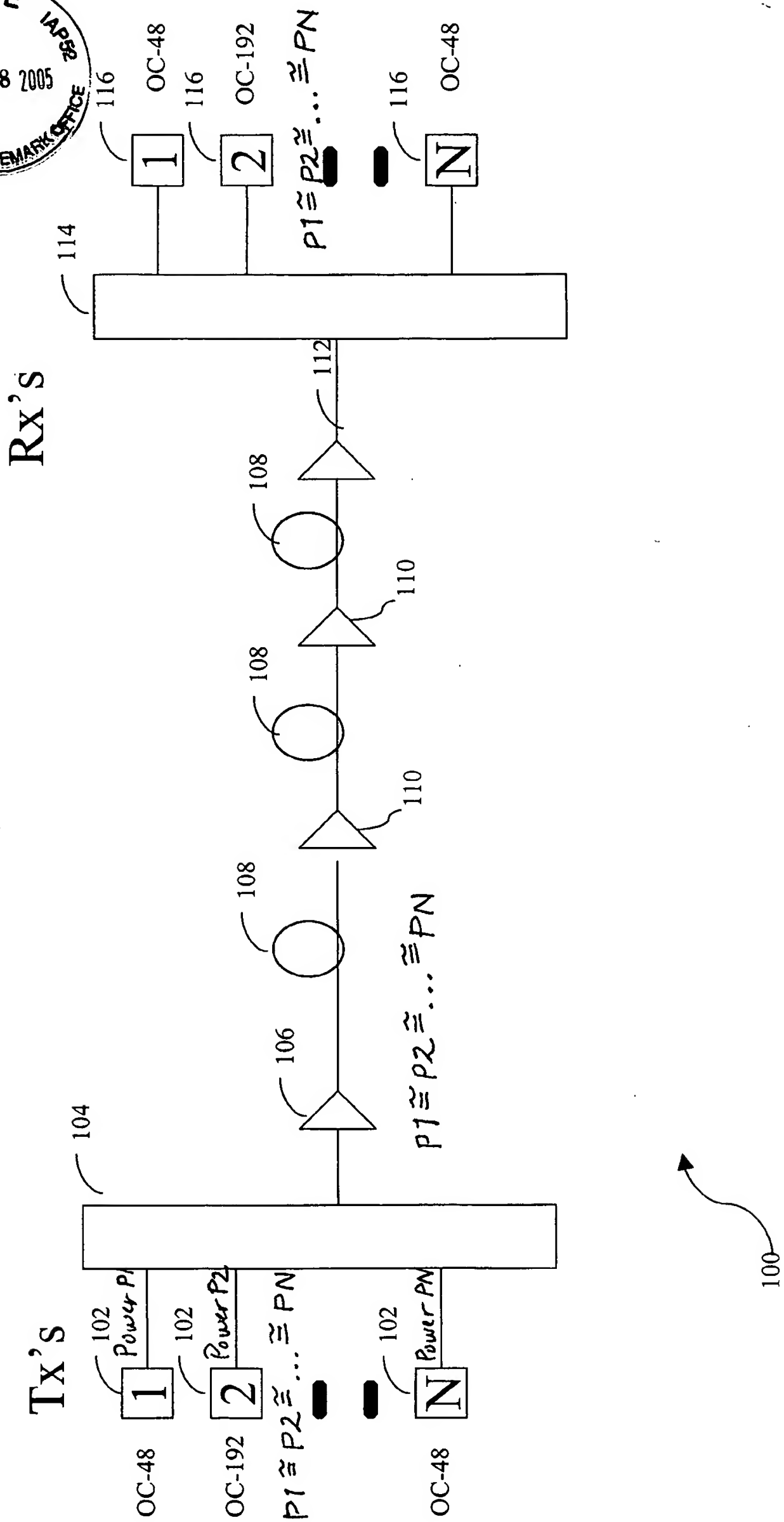
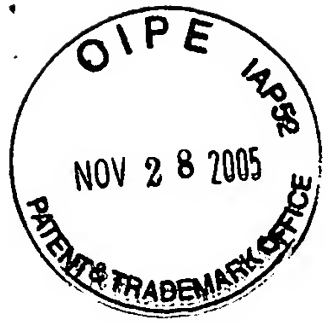


Fig. 1